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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,862	04/06/2001	Shinji Kuga	0505-0813P	3205

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

MCANULTY, TIMOTHY P

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 08/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

MS

Office Action Summary	Application No.	Applicant(s)	
	09/826,862	KUGA ET AL.	
	Examiner	Art Unit	
	Timothy P McAnulty	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-13, 15, 16 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-13, 15, 16 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 is unclear because it depends from itself. For the purposes of this Office action, claim 15 is being treated as depending from claim 13.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-4, 7-13, 15, 16, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara in view of US Patent No. 4,793,301 to Ishikawa (Ishikawa '301) and further in view of Bacher and further in view of Siblik.

Ishihara discloses in figure 4 a V-belt transmission comprising a crankshaft 56 connected to an engine 32; a driving pulley having a fixed pulley half 58 fixed to said crankshaft; a axially movable pulley half 68; a plurality of cooling fins 64 located on said fixed pulley half; an outside air inlet port (un-referenced) arranged opposite said fins; a short sleeve (un-referenced); a ramp plate 76; and a long sleeve 74; wherein said driving pulley coupled to a driven pulley so as to transmit a driving force to said driven pulley wherein the driven pulley is connected to an axel

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148 of a wheel drive section of the transmission via a driven shaft 94, a counter shaft 150, and a plurality of transmission gears 140.

Ishihara does not disclose said crankshaft specifically having a plurality of crank pins and a crank weight. However, Ishikawa '301 teaches in figures 1 and 6, an engine connected to a V-belt transmission comprising a crank shaft having a plurality of integral crank pins and an crank weight. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Ishihara in view of the teachings of Ishikawa '301 to provide a crankshaft having a plurality of crank pins and a crank weight so as to provide a two cylinder engine.

Ishihara does not disclose said fixed pulley half being fixed to said crankshaft by a bolt. However, Bacher teaches in figure 1, a fixed pulley half of a variable radius pulley fixed to a shaft with a bolt. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Ishihara in view of the teachings of Bacher to fix the fixed pulley half to the crankshaft by a bolt engaged in a bolt hole within the crankshaft to provide a greater thread engagement without increasing the overall length of the crankshaft.

Ishihara does not disclose said bolt hole being chamfered. However, Siblik teaches in figure 3 and lines 29-39 of column 4, a chamfered bolt hole in which a bolt is threadingly engaged. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Ishihara to provide a chamfer in order to assist bolt entry and guide the bolt into the bolt hole.

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Response to Arguments

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. Bacher clearly teaches fixing a fixed pulley half of a variable radius pulley to a crankshaft via a bolt. Further, Siblik teaches that chamfering of a bolt hole is old and well known in the art to assist bolt entry and alignment.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art regarding continuously variable transmissions in general:

US Patent No. 6,135,083 to Masuda et al.


US Patent No. 4,846,124 to Suzuki et al.


US Patent No. 4,846,115 to Ishikawa

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy P McAnulty whose telephone number is 703.308.8684. The examiner can normally be reached on Monday-Friday (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on 703.308.3668. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9326 for regular communications and 703.872.9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.1113.

tpm 
August 1, 2003

 8/4/03
DAVID A. BUCCI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600